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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,089	04/15/2004	Sammy Ming Kit Chau	64032/P015US/10404210	7160

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EXAMINER	
MANOHARAN, MUTHUSWAMY GANAPATHY	
ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/825,089	CHAU ET AL.	
	Examiner	Art Unit	
	Muthuswamy G. Manoharan	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08/17/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,8,9,13, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Averbauch et al. (hereinafter Averbuch) (US 5867785).

Regarding claim 1, Averbuch teaches a method of managing communications associated with a plurality of wireless devices (Col. 4, lines 30-31), comprising: detecting a first access point (item 140 in Figure 2); associating a station of a wireless switch with said first access point (item 203 in Figure 2; Col. 4, lines 21-23); routing data between said plurality of wireless devices (Col. 4, lines 30-31) and said first access point using said first station, detecting a second access point (item 149 in Figure 2); associating a second station of said wireless switch with said second access point (item 206 in Figure 2; Col. 4, line 27); monitoring signal strengths of said first and second access points as received by said first and second stations (Col. 5, lines 57-67; Col. 6, lines 1-9); and switching to routing data between said plurality of wireless devices and said second access point using said second station in response to said monitoring (Col. 8, lines 10-12).

Regarding claim 2, Averbuch teaches the method of claim 1 further comprising: associating said plurality of wireless devices (Col. 4, lines 30-31) with an access point of a wireless switch ("Mobile System Controller", Figure 2).

Regarding claim 8, Averbuch teaches the method of claim 1, wherein said wireless switch is disposed within a transportation vehicle (Figure 2; Abstract, lines 3-4).

Regarding claim 9, Averbuch teaches a wireless switch system (items 200, 203 and 206 in Figure 2) for managing communications of a plurality of wireless devices (Col. 4, lines 30-31), comprising: an internal access point for managing a wireless local area network (WLAN) that includes said plurality of wireless devices (203 in Figure 2) ; a plurality of stations (Col. 4, lines 29-31) for communicating with external access points (items 140....171 in Figure 2), and a packet switch controller (Col. 4, lines 19-21) for routing data between said plurality of wireless devices and external access points using said plurality of stations, wherein said packet switch controller is operable to switch communications between said plurality of stations in response to signal strengths received from said plurality of access points crossing threshold values (Col. 5, lines 57-67; Col. 6, lines 1-9).

Regarding claim 13, Averbuch teaches a wireless system, comprising: a plurality of access points, and a wireless switch comprising: a plurality of stations for communicating with said plurality of access points (Figure 2), an internal access point (item 231 in Figure 2) for managing communication with a plurality of wireless devices; and a packet switch controller (item 200 in Figure 2) for directing data between said plurality of stations and said plurality of wireless devices, wherein said packet switch controller switches between said plurality of stations in response to signal strengths received from said plurality of access points (Col. 5, lines 56-67; Col. 6, lines 1-9).

Regarding claim 18, Averbuch teaches the wireless system of claim 13 wherein said wireless switch is mounted to a transportation vehicle (Figure 2; Abstract, lines 3-4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch in view of Chia (US 5396253).

Regarding claims 3 and 11, Averbuch teaches all the particulars of the claim except wherein said monitoring comprises: applying a filtering function to received signal strengths. However, Chia teaches in an analogous art, wherein said monitoring comprises: applying a filtering function to received signal strengths (Col. 2, lines 65-68). Therefore, it would be obvious to one of ordinary skill in the art the time of invention to use the method except wherein said monitoring comprises: applying a filtering function to received signal strengths. This modification improves accuracy of the signal strength estimate during a deep fade.

Claim 4,10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch in view of Shostak (US 2004/0043797).

Regarding claim 4, Averbuch teaches all the particulars of the claim except maintaining a connection with said second access point by communicating ping packets

through said second access point. However, Shostak teaches in an analogous art, maintaining a connection with said second access point by communicating ping packets through said second access point (Paragraph [0058], lines 1-13). Therefore, it would be obvious to one of ordinary skill in the art the time of invention to maintain a connection with said second access point by communicating ping packets through said second access point. This modification helps in speeding up the handover process.

Regarding claims 10 and 17, Averbuch teaches all the particulars of the claim except 13 wherein said packet switch controller maintains a connection with one of said plurality of access points that is not currently used for data communications by routing ping packets through said one of said plurality of access points. However, Shostak teaches in an analogous art, wherein said packet switch controller maintains a connection with one of said plurality of access points that is not currently used for data communications by routing ping packets through said one of said plurality of access points (Paragraph [0058], lines 1-13). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use wireless system, wherein said packet switch controller maintains a connection with one of said plurality of access points that is not currently used for data communications by routing ping packets through said one of said plurality of access points. This modification helps in speeding up the handover process.

Claims 5,6,14,15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch in view of Noll et al. (hereinafter Noll) (US 2003/0153316).

Regarding claim 5, Averbuch teaches said plurality of wireless devices and said wireless switch are moving in a common direction (Figure 2; Col. 8, lines 42-43), the

method further comprising: operating a base station associated with said first access point by tracking movement of said plurality of wireless devices (Col. 4, lines 4-5). Averbuch did not teach specifically a directional antenna. However, Noll teaches in an analogous art, directional antenna ("directional antenna", Paragraph [0018], lines 7-8). Therefore, it would be obvious to one of ordinary skill in the art the time of invention to use directional antenna. This modification improves the communication efficiency.

Regarding claim 6, Averbuch teaches all the particulars of the claim except monitoring received signal strengths associated with respective patterns of antenna elements of said directional antenna; and switching between said patterns in response to monitoring received signal strengths associated with the respective patterns. However, Noll teaches in an analogous art, monitoring received signal strengths associated with respective patterns of antenna elements of said directional antenna; and switching between said patterns in response to monitoring received signal strengths (paragraph [0018], lines 1-15). Therefore, it would be obvious to one of ordinary skill in the art the time of invention to use the method of monitoring received signal strengths associated with respective patterns of antenna elements of said directional antenna; and switching between said patterns in response to monitoring received signal strengths. This modification improves the communication efficiency.

Regarding claim 14, Averbuch teaches all the particulars of the claim 14 except the directional antenna. However, Noll teaches in an analogous art, directional antenna ("directional antenna", Paragraph [0018], lines 7-8). Therefore, it would be obvious to one of ordinary skill in the art the time of invention to use directional antenna. This

modification improves the communication efficiency. Averbuch did teach "iDEN Enhanced Base Transceiver Site" by Motorolla which includes sector antenna (directional antenna).

Regarding claim 15, Averbuch in view of Noll teaches all the particulars of the claim 14. However, Averbach did not teach expressly monitoring signal strengths received from said wireless switch by a plurality of patterns of discrete antenna elements of said directional antenna. Moreover, Noll teaches in an analogous art, monitoring signal strengths received from said wireless switch by a plurality of patterns of discrete antenna elements of said directional antenna (paragraph [0018], lines 1-15). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to monitor signal strengths received from said wireless switch by a plurality of patterns of discrete antenna elements of said directional antenna. This modification improves the communication efficiency.

Regarding claim 16, Averbuch in view of Noll teaches all the particulars of the claim 15. However, Averbuch did not teach expressly wherein said controller of said base station switches between said plurality of patterns in response to said monitoring. Moreover, Noll teaches in an analogous art, wherein said controller of said base station switches between said plurality of patterns in response to said monitoring (paragraph [0018], lines 1-15). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the wireless system wherein said controller of said base station switches between said plurality of patterns in response to said monitoring.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch in view of Haumont et al. (hereinafter Haumont) (US 2001/0012279).

Regarding claim 12, Averbuch teaches all the particulars of the claim except wherein when said packet switch controller switches communications between a first station to a second station, said switch controller distributes remaining packets received by said first station to said plurality of wireless devices and send acknowledgement packets through said second station. However, Haumont discloses in an analogous art, wherein when said packet switch controller switches communications between a first station to a second station, said switch controller distributes remaining packets received by said first station to said plurality of wireless devices and send acknowledgement packets through said second station (Paragraph [0053], lines 21-32; Paragraph [0083], lines 1-12). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use wireless system, wherein when said packet switch controller switches communications between a first station to a second station, said switch controller distributes remaining packets received by said first station to said plurality of wireless devices and send acknowledgement packets through said second station. This modification prevents the second access points from sending duplicate packets.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch in view of Haumont et al. (hereinafter Haumont) (US 2001/0012279) and further in view of Gresham et al (hereinafter Gresham) (US 20020160773).

Regarding claim 7, Averbuch in view of Haumont teaches all the particulars of the claim except wherein the packets from the first access point that are associated with

transmission control protocol (TCP) sessions. However, Gresham teaches in an analogous art, the wireless switch system wherein the packets from the first access point that are associated with transmission control protocol (TCP) sessions (Paragraph [0099], line 19). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use wireless system, wherein the packets from the first access point that are associated with transmission control protocol (TCP) sessions. This modification helps in accessing Internet through mobile devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muthuswamy G. Manoharan whose telephone number is 571-272-5515. The examiner can normally be reached on 7:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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